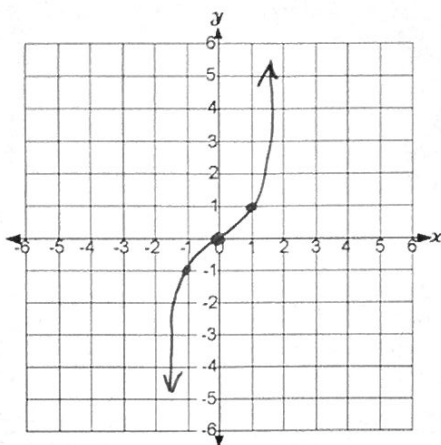
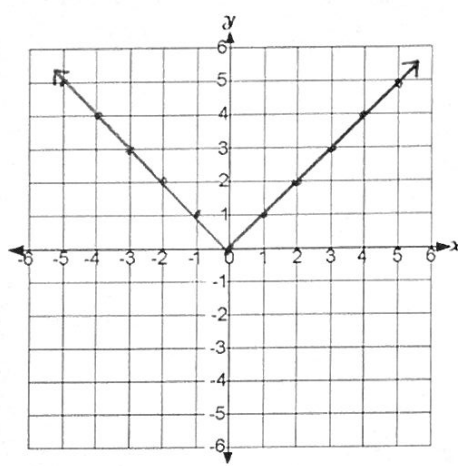


**Parent Functions Quiz - PRACTICE**

1) Fill in the chart

| Function              | $f(x) = x^3$   | $g(x) =  x $  |
|-----------------------|--|---|
| Graph                 |                     |                   |
| Domain                | $\{x   x \in \mathbb{R}\}$   | $\{x   x \in \mathbb{R}\}$  |
| Range                 | $\{y   y \in \mathbb{R}\}$   | $\{y   y \geq 0, y \in \mathbb{R}\}$  |
| Intervals of Decrease | N/A  | $(-\infty, 0)$  |
| Negative interval     | $(-\infty, 0)$   | N/A   |
| End Behaviours        | as $x \rightarrow \infty, y \rightarrow \infty$<br>as $x \rightarrow -\infty, y \rightarrow -\infty$ | as $x \rightarrow \infty, y \rightarrow \infty$<br>as $x \rightarrow -\infty, y \rightarrow \infty$ |

2) Which characteristics (listed in the chart) would change if you reflected each parent graph through the x-axis?

 $x^3$ 

interval of  $\downarrow$   
negative interval  
end behaviours

 $|x|$ 

Range  
interval of  $\downarrow$   
negative interval  
end behaviours

3) Graph the following functions

- $-5f(x-3)+1$

$$-5(x-3)^3 + 1$$

- $g(-4x+12)-2$

$$\begin{aligned} |-4x+12|-2 &= |-4(x-3)|-2 \\ &= 4|x-3|-2 \end{aligned}$$

